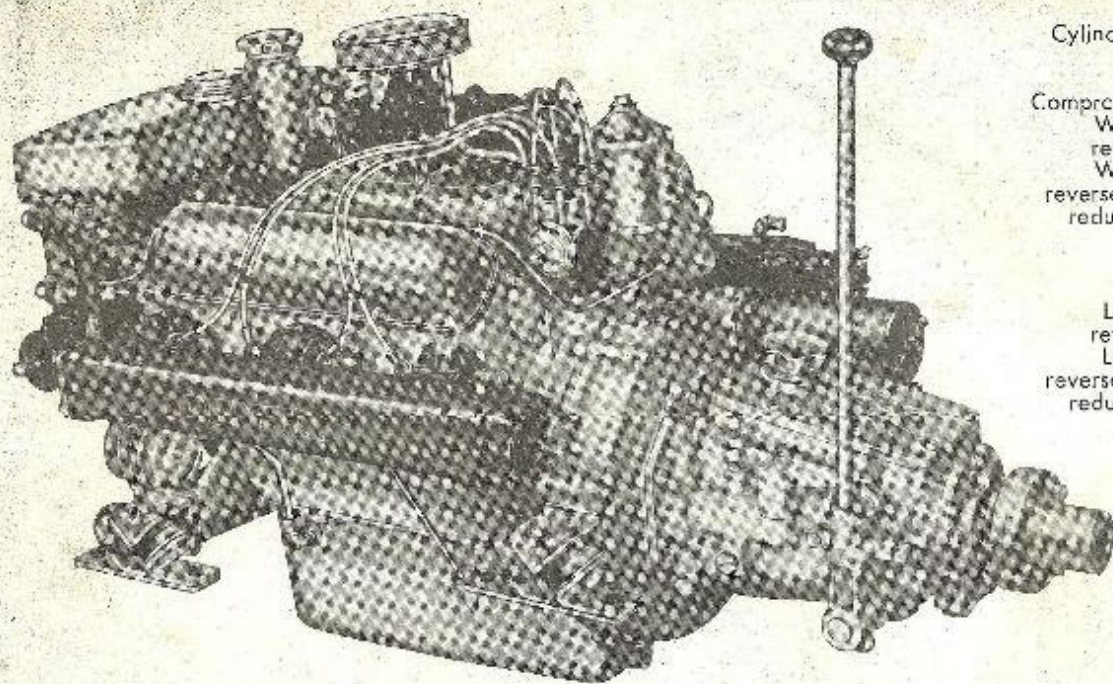


MB 36A

MAIN DATA MB 36 A

Potential	72—120 hp
R.p.m.	2000—4000
Number of cylinders	V 8
Valves	Overhead
Cylinder volume	3,6 l. (220 cu. ins.)
Stroke	80 mm (3,14 ins.)
Bore	84,14 mm (3,31 ins.)
Compression ratio	7,6:1
Weight with reverse gear	340 kilos (750 lbs)
Weight with reverse gear and reduction gear	390 kilos (890 lbs)
Height	824 mm (32,45")
Width	700 mm (27,56")
Length with reverse gear	1260 mm (49,60")
Length with reverse gear and reduction gear	1471 mm (57,91")



Penta Presents the MB 36 A

The MB 36 A is an overhead valve, four-stroke, V8 petrol (gasoline) engine with an output range of 70—130 bhp at 2000—4000 r.p.m. and a torque of 26 kgm (188 lb.ft.) at 2200 r.p.m. The displacement of the engine is 3.6 litres (219.6 cu.ins.) bore 84.14 mm (3.31 ins.) stroke 80 mm (3.14 ins.) and compression ratio 7.6:1. The engine is fitted with a double carburettor with manual choke and a mechanical fuel pump which permits low-level installation of the fuel tanks. The induction manifold is fresh-water warmed to counteract fuel condensation and to ensure the correct distribution of the fuel-air mixture to the eight cylinders. The air filter fitted on the double-down-draught carburettor also functions as a flash eliminator. The MB 36 has exceptionally low fuel consumption — about 205 grams/hp/hr. (0.452 lb./hp/hr).

The oil system has a capacity of about 10 litres (17.5 Imp. pints). All oil passes through a full-flow filter on its way to the bearings, valve mechanism etc. This filter has paper elements which are easily replaceable. This ensures that the oil is purified to a high degree. Standard equipment includes a tubular oil cooler.

Fresh water cooling is standard on the MB 36 A in order to avoid sea-water corrosion of the engine block and cylinder heads. A circulating pump forces fresh water through the engine. This fresh water is cooled by means of sea-water in the heat exchanger. The sea-water is fed by a "Jabsco" pump with a neoprene rubber impeller which is not affected by sludge etc. The temperature of the cooling water is automatically regulated by means of a thermostat which ensures a rapid warm-up and maintains the correct working temperature in the engine. This "Jabsco" pump also delivers water to the oil cooler and the exhaust pipe jacket. The capacity of the fresh water system is about 17 litres (3.5½ Imp. gallons).

Electrical equipment consists of a 12-volt battery system with automatic centrifugal and vacuum ignition advance mechanisms, 1 bhp starter motor, 130-watt built-in dynamo and a voltage regulator. The reverse gear is of the planetary type with a wet multi-disc clutch for travel ahead and brake bands for travel astern. It has a

fixed neutral position and perfect neutral operation so that the propeller does not rotate when the engine is idling.

This engine can be used to good advantage in heavier boat types if it is supplemented with a reduction gear. This gear is water-cooled and has a ratio of 2:1.

The steady, vibration-free operation which is typical of V8 engines can be improved even more by fitting Penta-type rubber mounting blocks. The elegant instrument panel accompanying the engine should be fitted in the wheel-house. Perfect control of the function of the engine is ensured by means of the gauges and switches on the panel: choke control, thermometer, oil pressure gauge, tachometer, charging control indicator, starter switch, ignition switch and indirect instrument lighting.

Compared with its output of 120 hp the weight of the MB 36 is low about 340 kgs (750 lb.) with the reverse gear and about 390 kg (860 lb.) with reverse gear and reduction gear. This is important when the aim is to achieve high speeds in light-weight boats.

This new V8 engine is very compactly constructed and has the following overall external dimensions: height 824 mm (32.45"), width 700 mm (27.56"), length with reverse gear 1260 mm (49.60"), length with reverse gear and reduction gear 1471 mm (57.91").

Further information about the MB 36 A:

Special-alloy cast-iron cylinder heads with fully finished spheroidal combustion chambers. The block is carried down below the crankshaft line ensuring rigidity and giving an unbroken, completely oil-tight sealing edge. Chill-cast light-alloy pistons, each with two compression rings and one three-part oil control ring. The upper compression ring on each piston is chromed. Drop-forged, case-hardened connecting rods. Crankshaft of hardened special steel, statically and dynamically balanced, carried in five bearings. Main bearings and big-end bearings consist of replaceable shells of the tri-metal type. Cast, flame-hardened camshaft, carried in five white-metal lined steel bushings, chain driven. Nickel-steel inlet valves, chrome-nickel alloy steel exhaust valves resistant to tetra-ethyl fuel.

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